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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/636,159

08/06/2003

Masataka Katoh

KUSUMOTO 221-KFM

3603

7590

05/17/2005

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EXAMINER

VU, PHU

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/636,159

Applicant(s)

KATOH ET AL.

Examiner

Phu Vu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment A (dated 2/18/05)
2. Claims 1-6 are presented for examination.

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Shiota et.**

**al. US Publication No. 2002/01154079.**

Shiota teaches a method of changing a bright pixel to a dark pixel in an in-plate switching liquid crystal display comprising a substrate (fig. 21b element 1001, 1002) , with pixel regions thereon arranged in rows and columns (see fig 21a), an aperture (see fig. 21a "white area" inside grid) formed in each pixel region of the substrate and having liquid crystal (fig. 21b element 1003) and at least one strip-like electrode therein (fig. 21a element 1006a); a CS circuit (fig. 21 element 1015) disposed in each pixel region adjacent to the aperture and a pad (fig. 21 element 1006b) disposed in opposition to

each CS circuit and connected to the strip-like electrodes, said method comprising the step of:

cutting the strip-like electrode at the end of the aperture (see fig. 21 element 1022 also see specification [0019]) of only a bright pixel region, among the plurality of pixel regions by a laser beam.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3, and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota and further in view of Murakami US Publication No. 2003/0025846.**

**Regarding claims 1**, Shiota teaches an IPS liquid crystal display comprising:  
a substrate (fig. 21b elements 1001 1002), with pixel regions (see fig. 21a) thereon arranged in rows and columns;

an aperture (see fig. 21a white area formed between pixel electrodes 1006a and common electrodes 1007a) formed in each pixel region of the substrate and having a liquid crystal and at least one strip-like pixel electrode therein;

a capacitor storage circuit (fig. 21a element 1015) disposed in each pixel region adjacent to the aperture; and a pad (fig. 21a element 1006b) disposed in opposition to each CS circuit and connected to the strip-like electrode,

Shiota fails to teach a cut formed in a side of the CS circuit to which the aperture is adjacent. Murakami teaches a cut (fig. 4 element 20&21) formed in a side of the CS circuit (fig. 4 element 3 & 13) to which the aperture is adjacent to prevent a short circuit between the image signal line and the pixel electrode (see [0047]). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to form a cut in a side of the CS circuit to prevent short circuit between the image signal line and the pixel electrode.

**Regarding claim 2**, cut 22 in figure 4 cuts the storage capacitance line and the pixel electrode so the limitation of a laser beam that maybe a applied to the strip-like electrode is met by the combination of Shiota and Murakami.

**Regarding claim 3**, Shiota teaches an IPS liquid crystal display comprising:  
a substrate (fig. 21b elements 1001 1002), with pixel regions (see fig. 21a) thereon arranged in rows and columns;  
an aperture (see fig. 21a white area formed between pixel electrodes 1006a and common electrodes 1007a) formed in each pixel region of the substrate and having a liquid crystal and at least one strip-like pixel electrode therein;

a capacitor storage circuit (fig. 21a element 1015) disposed in each pixel region adjacent to the aperture; and a pad (fig. 21a element 1006b) disposed in opposition to teach CS circuit and connected to the strip-like electrode,

Shiota fails to teach a cut formed in a part of the CS circuit that corresponds to the location of the strip-like electrode. Murakami teaches a cut (fig. 4 element 20&21) formed in a part of the CS circuit that corresponds to the location of the striplike-

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electrode (fig. 4 element 3 & 13) to prevent a short circuit between the image signal line and the pixel electrode (see [0047]). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art cut the CS circuit in a part that corresponds to the location of the striplike-electrode to prevent a short circuit between the image signal line and the pixel electrode.

**Regarding claim 5**, Shiota teaches a method of changing a bright pixel to a dark pixel in an in-plate switching liquid crystal display comprising a substrate (fig. 21b element 1001, 1002) , with pixel regions thereon arranged in rows and columns (see fig 21a), an aperture (see fig. 21a "white area" inside grid) formed in each pixel region of the substrate and having liquid crystal (fig. 21b element 1003) and at least one strip-like electrode therein (fig. 21a element 1006a); a CS circuit (fig. 21 element 1015) disposed in each pixel region adjacent to the aperture and a pad (fig. 21 element 1006b) disposed in opposition to each CS circuit and connected to the strip-like electrodes, said method comprising the step of:

Shiota fails to teach cutting a side of the CS circuit to which the aperture is adjacent.

Murakami teaches a cut (fig. 4 element 20&21) formed in a side of the CS circuit (fig. 4 element 3 & 13) to which the aperture is adjacent to prevent a short circuit between the image signal line and the pixel electrode (see [0047]). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to cut in a side of the CS circuit to prevent short circuit between the image signal line and the pixel electrode.

**Regarding claim 6**, this claim is the same as claim 5 except a cut is replaced with a "window." A window is interpreted as a means of access or observation as per the American heritage college dictionary. Therefore this limitation is obvious because the pixel electrodes is cut through a window of the CS circuit. The pixel area cuts (elements 21 and 22) lie above portions of the CS circuit, which are cut to provide access to the pixel electrode.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

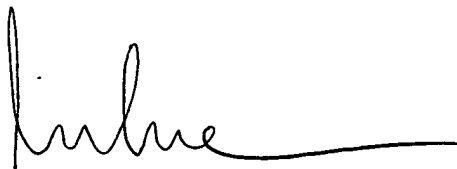
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562. The examiner can normally be reached on 8AM-5PM M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu  
Examiner  
AU 2871



DUNG T. NGUYEN  
PRIMARY EXAMINER